As such, the combination formulated will improve hepatic function in conditions associated with chronic viral infections, as well as any condition associated with increased hepatic work or stress.

Thus by the present invention its advantages will be realized and although preferred embodiments have been disclosed and described in detail herein, its scope should not be limited thereby rather its scope should be determined by that of the appended claims.

What is claimed is:

1. A composition of matter, which comprises in admixture;

N-acetylcysteine; N-acetyl-d-glucosamine vitamin C whereby the amount of vitamin C is in an amount of at least 1000 mg. or greater to facilitate the absorption of N-acetylcysteine across the cellular membrane; and,

a pharmaceutically acceptable carrier for oral administration.

2. The composition of claim **1** further comprising one or more of the following substances from the group consisting of alpha-lipoic acid, sylmarin, quercitin, l-glutamine, a probiotic, and dietary protein.

3. The composition of claim **1** further comprising alpha-lipoic acid, sylmarin, quercitin, l-glutamine, and a probiotic.

4. The composition of claim **3** further comprising dietary protein.

5. The composition of claim **1** further comprising flavorants.

6. The systematic administration of a pharmaceutically effective amount of the composition according to claim **1** to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal.

7. The systemic administration of a pharmaceutically effective amount of the composition according to claim **2** to a mammal suffering from hepatitis, to stimulate the natural production of glutathione in the biologically active cells of the mammal.

8. The systemic administration of a pharmaceutically effective amount of the composition according to claim **2** to a mammal suffering from HIV, to stimulate the natural production of glutathione in the biologically active cells of the mammal.

9. The systemic administration of a pharmaceutically effective amount of the composition according to claim **2** to a mammal suffering from allergies, to stimulate the natural production of glutathione in the biologically active cells of the mammal and to promote the shift of the T-cell balance from TH2 to TH1 and decrease levels of IgE.

10. The systemic administration of a pharmaceutically effective amount of the composition according to claim **2** to a mammal to decrease serum cholesterol and triglycerides.

11. The systemic administration of a pharmaceutically effective amount of the composition according to claim **2** to a mammal suffering from one or more of the following illnesses from the group consisting of chronic viral infections: HIV, hepatitis C, chronic fatigue, immuno deficiency syndrome, immune deficiencies, cancer, B-cell malignancies, including lymphomas, chronic leukemia, myeloma Waldenstrom's and MGUS to improve immune defense productions and thereby mitigate the progression of the illnesses to thereby limit fatigue.

12. The systemic administration of a pharmaceutically effective amount of the composition according to claim **2** to a mammal to decrease fatigue.

13. The systemic administration of a pharmaceutically effective amount of the composition according to claim **2** to a mammal to decrease the biologic effects of stress.

14. The systemic administration of a pharmaceutically effective amount of the composition according to claim **2** to a mammal to increase energy and improve physical performance.

15. Administration according to claim **6** wherein a pharmaceutically effective amount is 0.1 mg/kg to about 50 mg/kg of body weight of the mammal, daily.

16. Administration according to claim **6** wherein a pharmaceutically effective amount is 0.5 mg/kg to about 25 mg/kg of body weight of the mammal, daily.

17. The systemic administration of a pharmaceutically effective amount of the composition according to claim **2** to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal.

18. The systemic administration of a pharmaceutically effective amount of the composition according to claim **3** to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal.

19. The systemic administration of a pharmaceutically effective amount of the composition according to claim **1** to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal and reduce symptoms of diseases caused by excess unneutralized free radicals.

20. The systemic administration of a pharmaceutically effective amount of the composition according to claim **2** to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal and reduce symptoms of diseases caused by excess unneutralized free radicals.

21. The systemic administration of a pharmaceutically effective amount of the composition according to claim **3** to a mammal suffering from low glutathione levels, to stimulate the natural production of glutathione in the biologically active cells of the mammal and reduce symptoms of diseases caused by excess unneutralized free radicals.

22. The systemic administration of a pharmaceutically effective amount of the composition according to claim **19**, wherein the disease is a member of the group consisting of pulmonary oxygen toxicity, adult respiratory distress syndrome, broncopulmonery dysplasia, sepis syndrome, Parkinson's disease, encephalitis, endotoxemia, anoxia induced neuronal damage, ischemic reperfusion injury, inflammatory diseases, systemic lupus erythematosis, myocardial infarction, stroke, traumatic hemorrhage, spinal cord trauma, Crohn's disease, rheumatoid arthritis, diabetes, cataract formation, uvetis, emphysema, gastric ulcers, oxygen toxicity, neoplasia, undesired cell apoptosis, radiation sickness.

23. The systemic administration of a pharmaceutically effective amount of the composition according to claim **20**, wherein the disease is a member of the group consisting of pulmonary oxygen toxicity, adult respiratory distress syndrome, broncopulmonery dysplasia, sepis syndrome, Parkinson's disease, encephalitis, endotoxemia, anoxia induced neuronal damage, ischemic reperfusion injury, inflammatory diseases, systemic lupus erythematosis, myocardial infarction, stroke, traumatic hemorrhage, spinal cord trauma, Crohn's disease, rheumatoid arthritis, diabetes, cataract formation, uvetis, emphysema, gastric ulcers, oxygen toxicity, neoplasia, undesired cell apoptosis, radiation sickness.

24. The systemic administration of a pharmaceutically effective amount of the composition according to claim **21**, wherein the disease is a member of the group consisting of

pulmonary oxygen toxicity, adult respiratory distress syndrome, broncopulmonery dysplasia, sepis syndrome, Parkinson's disease, encephalitis, endotoxemia, anoxia induced neuronal damage, ischemic reperfusion injury, inflammatory diseases, systemic lupus erythematosis, myocardial infarction, stroke, traumatic hemorrhage, spinal cord trauma, Crohn's disease, rheumatoid arthritis, diabetes, cataract formation, uvetis, emphysema, gastric ulcers, oxygen toxicity, neoplasia, undesired cell apoptosis, radiation sickness.

25. The systemic administration of a pharmaceutically effective amount of the composition according to claim **1** to a mammal, to promote the natural production of glutathione in the biologically active cells of the mammal which accelerates the detoxification of ethanol and alleviates symptoms associated with excessive ethanol imbibation.

26. The composition of claim **1** further comprising a probiotic, said probiotic for promoting the breakdown and absorption of nutrients, the elimination of toxins and to inhibit the growth of harmful bacteria in the gastrointestinal tract, thereby facilitating the absorption of N-acetylcysteine into the gastrointestinal tract.

27. The probiotic of claim **1**, wherein said probiotic is a composition of "healthy bacteria" containing one or more of said healthy bacteria selected from the group comprising *bifidobacterium longum, bifidobacterium infantis, lactobacillus acidophilus, lactobacillus casei, lactobacillus rhamnosus, saccharomyces boulardi, propionibacteria* and *enterococci.*

28. The composition of claim **2** further comprising 1-glutamine, said component being an essential dietary component to promote the support of gastrointestinal growth and function, thus facilitating the absorption of N-acetylcysteine through the gastrointestinal tract.

29. The composition of claim **4** wherein N-acetyl-d-glucosamine promotes the biosynthesis of mucosal glycoproteins which make up the glycocalyx, a layer of the gut mucosa which acts to protect the tissue of the gastrointestinal tract while providing a selectively absorptive surface, thus facilitating the absorption of N-acetylcysteine into the gastrointestinal tracts.